

NOTES ON THE GENUS *KUNZEA* (MYRTACEAE) IN QUEENSLAND

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Summary

Two new species of *Kunzea*, *K. obovata*, *K. graniticola* and a new variety *K. opposita* F. Muell. var. *leichhardtii* are described. Notes on all species of *Kunzea* found in Queensland are given with their distribution and a key to the species is included.

The genus *Kunzea* was not recognised as being present in Queensland by Bentham (1866). Bailey (1900) in the *Queensland Flora* included only *K. calida* F. Muell. and *K. peduncularis* F. Muell. The latter is now referred to as *Leptospermum phylloides* (Cunn. ex Schau.) Cheel.

K. opposita F. Muell. was described (1867) from a specimen collected at Timbarra, N.S.W. not far from the Queensland border and this was followed by the description of *K. bracteolata* Maiden & Betche (1905) and *K. flavescens* White & Francis (1921) from specimens collected in the Darling Downs area. Numerous collections of the genus have been made in Queensland and examination revealed the existence of two undescribed species and a new variety.

Key to Queensland species (all in sect. *Salisia*)

1. Flowers white or cream..... 2
 Flowers pink or mauve 4
2. Inflorescence without bracts at anthesis, northern coastal ranges.....
 K. graniticola
- Inflorescence with persistent bracts, southern ranges 3
3. Calyx glabrous, leaves narrowly elliptical..... 2. *K. bracteolata*
 Calyx pubescent, leaves obovate 3. *K. flavescens*
4. Leaves obovate, concave but not channelled above..... 4. *K. obovata*
 Leaves linear or narrowly triangular, channelled above 5
5. Leaves linear, villous 5. *K. calida*
 Laves narrowly triangular, usually glabrous below, pubescent above 6
6. Leaves less than 3 mm long *K. opposita* var. *opposita*
 Leaves more than 4 mm long *K. opposita* var. *leichhardtii*

1. *Kunzea graniticola* N. Byrnes sp. nov. affinis *K. ambiguae* (Sm.) Druce sed inflorescentia capituli terminalis, marginibus petalorum erosis et lobis calycis brevioribus. **Typus:** *R. Smith* 8a.

Shrub to 4 m. Branchlets minutely pubescent at first, glabrescent. Leaves alternate or scattered, narrowly obovate or elliptical, 4-20 mm long, 1-1.5 mm wide, acute, narrowly cuneate at the base, sessile, uninerved and punctate below, glabrous. Flowers white, sessile, 2-5 in a terminal head, bracts and bracteoles caducous. Calyx glabrous, punctate, ovoid, 5-6 mm long, lobes

slightly keeled towards the apex, 1–1.5 mm long. Petal circular or transversely elliptical, *ca* 2 mm long, margins erose. Stamens numerous, filaments 3–5 mm long, anthers 0.4 mm long. Style *ca* 7 mm long. Stigma peltate. Ovary trilocular, adnate to the lower calyx tube, ovules numerous in each locule on a peltate placenta. Fruit a thin-walled capsule retaining the calyx lobes.

Queensland. NORTH KENNEDY DISTRICT: *ca* 16 km north of Ingham, 22 Aug 1975, *Smith 8a* (BRI 197154, holo; CANB, iso); Waterfall Crk, Cardwell Ra., 25 Aug 1974, *Jackes*; 5-Mile Creek, *ca* 8 km S. of Cardwell, 22 Sep 1976 *Thorsborne*, 21 Sep 1977, *Williams 77234* & 8 Aug 1979, *Byrnes 3919*; Hinchinbrook I., Little Ramsay Bay, 11 Aug 1976, *Sharpe 1614*; Mt Bowen, Hinchinbrook I., 25 Aug 1966, *Thorsborne*; Zoe Bay, Hinchinbrook I., 21 Aug 1951, *Blake 18852*.

Range. All collections have been made in a restricted area including Hinchinbrook Island and the adjacent mainland.

Habitat. Among rocks in skeletal soils of granitic origin. This species was first collected comparatively recently in 1951 and this late discovery was due to the difficulty of access and restricted range of the species. With *K. ambigua* it can be readily recognised from other species in section *Salisia* having trilocular ovaries by the absences of bracts at anthesis. The compact terminal heads of *K. graniticola* differ from the loose, usually axillary flowering of *K. ambigua*.

2. *Kunzea bracteolata* Maiden & Betche has been collected from a number of sites since Boorman first collected it in 1904. All of the collections have been from the high granitic country within 35 km of Stanthorpe.

3. *Kunzea flavescens* White & Francis is very restricted in its distribution with the only specimens coming from the type locality, Crows Nest, and Biggenden Bluff, Mt Walsh.

In the original description it is stated that the ovary is "with a single ovule in each cell". Re-examination of the type specimen revealed the typical peltate placenta in each cell with numerous ovules attached, so it belongs to the section *Salisia*, not *Eukunzea* as originally stated. The ovules could be dissected out as a unit and could have easily been mistaken for a single seed.

4. *Kunzea obovata* N. Byrnes sp. nov. affinis *K. parvifoliae* Schau. sed foliis longioribus et calyce sericeo. **Typus:** *Byrnes 3932*.

Shrub to 3 m high. Branchlets villous. Leaves alternate or scattered, obovate or rarely broadly elliptical, acute, usually reflexed at the tip, concave above, 3–9 mm long, 0.5–1.5 mm wide, thinly villous at first, glabrescent, punctate, usually with the midvein visible below; petiole to 1 mm long. Flowers pink, 5–10 in a bracteate head. Bracts and bracteoles sericeous outside, *ca* 2 mm long. Petals broadly obovate, *ca* 1.5 mm long, margins erose. Stamens numerous, 3–5 mm long. Style *ca* 6 mm long. Stigma small, terminal. Ovary trilocular, adnate to the lower calyx tube, ovules numerous in each locule on a peltate placenta. Fruit a thin walled capsule retaining the calyx lobes.

Queensland. DARLING DOWNS DISTRICT: Cottonvale–Amiens Rd, 9 Oct 1979, *Byrnes 3932*, (BRI 247872 holo; CANB, K, NSW, iso); near Passchendale, 13 Oct 1968, *Everist 8121*; Thulimbah–Poziers Rd, 6 km W of Thulimbah, 7 Oct 1975, *Williams 75106*; Mt Norman, 6 Dec 1970, *Hockings*; Nov 1944, *Clemens 44702*; Fletcher, 29 Oct 1963, *Pedley 1465*; Portion 134, Tenterfield, 24 Sep 1974, *McDonald 414*. **New South Wales.** 8 km N of Deepwater, 3 Oct 1969, *Coveny 2250*; Torrington, 30 Sep 1969, *Jones*, 2 Nov 1953, *Jessup & Gray*; Boonoo Boonoo Falls, 16 Oct 1960, *Morrow*.

Range. Northern New England Tableland, New South Wales to southern Darling Downs, Queensland.

Habitat. Skeletal or gritty sandy soils mainly derived from granite.

This species is intermediate between *K. parvifolia* Schau. and *K. capitata* Reichb. and has been classified under both names. It differs from the former in having larger and broader leaves, usually 4–9 mm long and a sericeous calyx. *K. parvifolia* usually has leaves less than 3 mm long and most of the specimens examined including the type have a glabrous calyx tube. When an indumentum is present it consists of sparse short hairs.

It can be distinguished from *K. capitata* by its narrower, uninerved leaves. *K. capitata* is trinerved. *K. parvifolia* is native to Victoria and southern and central New South Wales. *K. capitata* is widely spread in coastal areas and adjacent tablelands south of the Richmond River.

5. *Kunzea calida* F. Muell. is represented by only the type collection held at Kew. The species is distinct with its linear grooved leaves, branchlets and inflorescence covered with long fine tangled hairs. The exact locality of the collection of the type material given as the source of Flinders River, Newcastle Range is obscure but the area is rugged and poorly explored botanically.

6. *Kunzea opposita* F. Muell. has been confused with *K. parvifolia* Schau. in Queensland. This was due mainly to the concept that *K. opposita* has opposite leaves only. Of the many specimens examined those with strictly opposite leaves were in the minority. The leaves can be opposite, subopposite, alternate, or spirally arranged even on the one plant. The type collection (several sheets) is one of the forms which has mainly opposite or subopposite leaves but on the left hand side of type sheet MEL 82193 there are alternately arranged leaves.

Kunzea parvifolia is not native to Queensland. It can be distinguished from *K. opposita* by its small obovate, very shortly petiolate leaves which are concave but not channelled above and the glabrous or very sparsely pubescent calyx. In *K. opposita* the leaves are sessile, narrowly triangular, channelled above with the channel being lined with a dense woolly indumentum and the calyx is pubescent although this varies in density and length. Usually the leaves are less than 3 mm long as represented by the type material but specimens collected from Blackdown Tableland have leaves 4–6 mm long and the inflorescence has wider flowers with a longer indumentum. These differences give the plant a distinctly different appearance and for these reasons is here given a varietal status.

K. opposita F. Muell. var. ***leichhardtii*** N. Byrnes, var. nov. Folia 4–6 mm longa. Flores latiores. Inflorescentia indumento longiore. **Typus:** *Henderson 972 Durrington & Sharpe*.

Queensland. LEICHHARDT DISTRICT: Blackdown Tableland, ca 35 km S.E. of Blackwater, Sep 1971, *Henderson 972, Durrington & Sharpe* (holo BRI 182140); Blackdown, 3rd Creek, Aug 1964, *Gittins 900*.

Range: This variety appears to be restricted to the Blackdown Tableland of central Queensland.

Habitat: Shallow sandy soils in sandstone area.

Kunzea ambigua under the name *K. cordifolia* was reported to be found near Wallangarra by Maiden & Betche (1905), but there are no specimens to substantiate this in Queensland Herbarium.

References

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